

(No Model.)

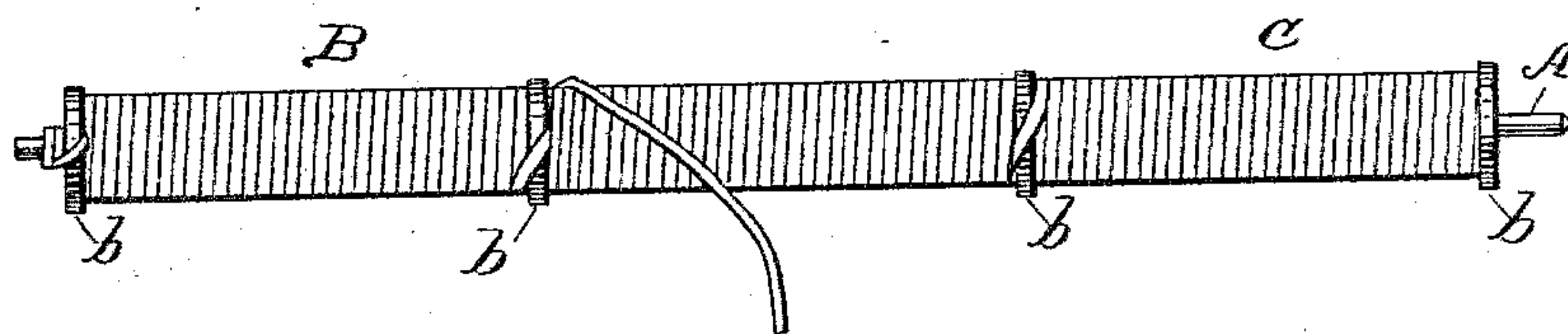
B. F. LANDIS.

BOBBIN.

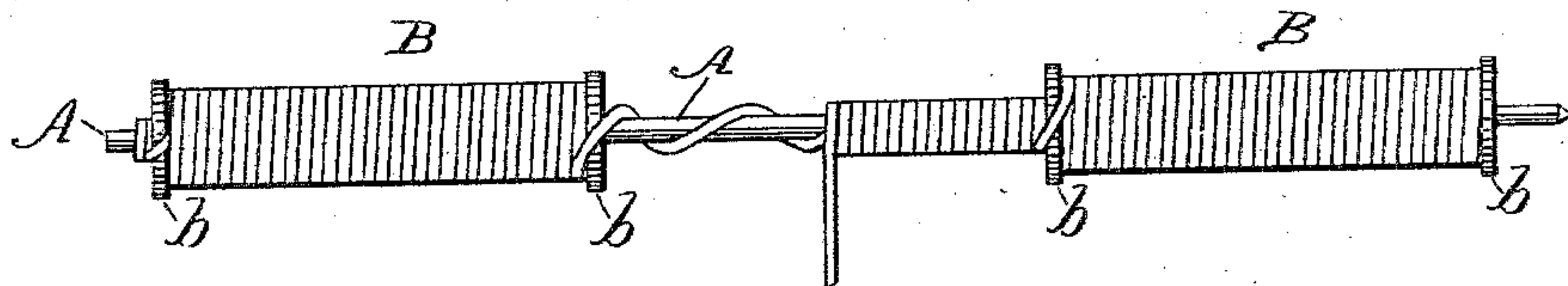
No. 305,935.

Patented Sept. 30, 1884.

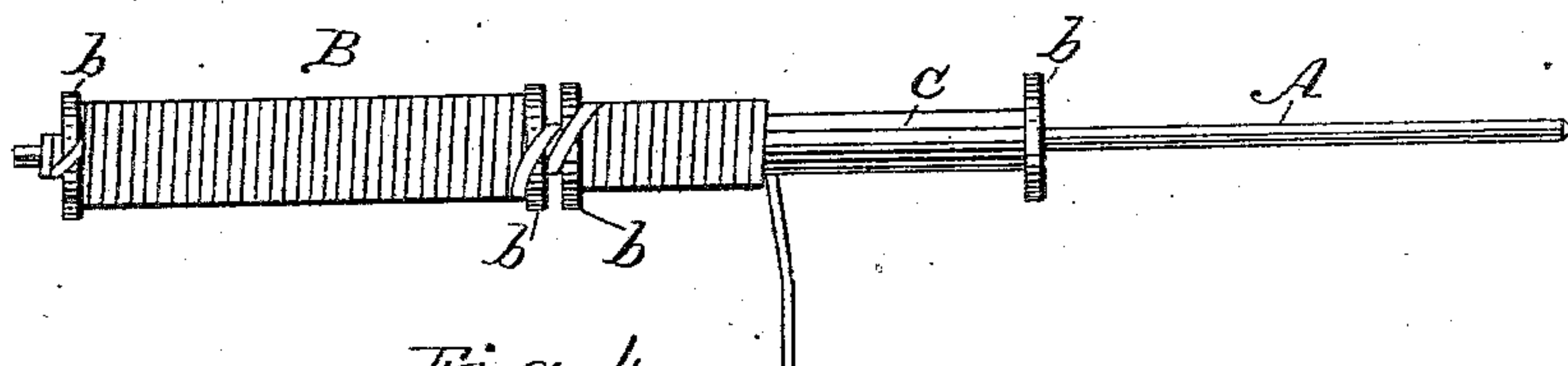
*Fig. 1.*



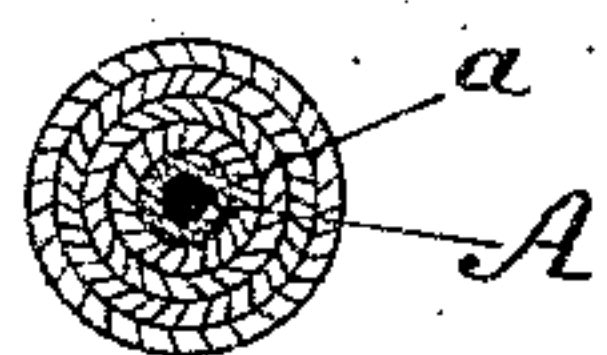
*Fig. 2.*



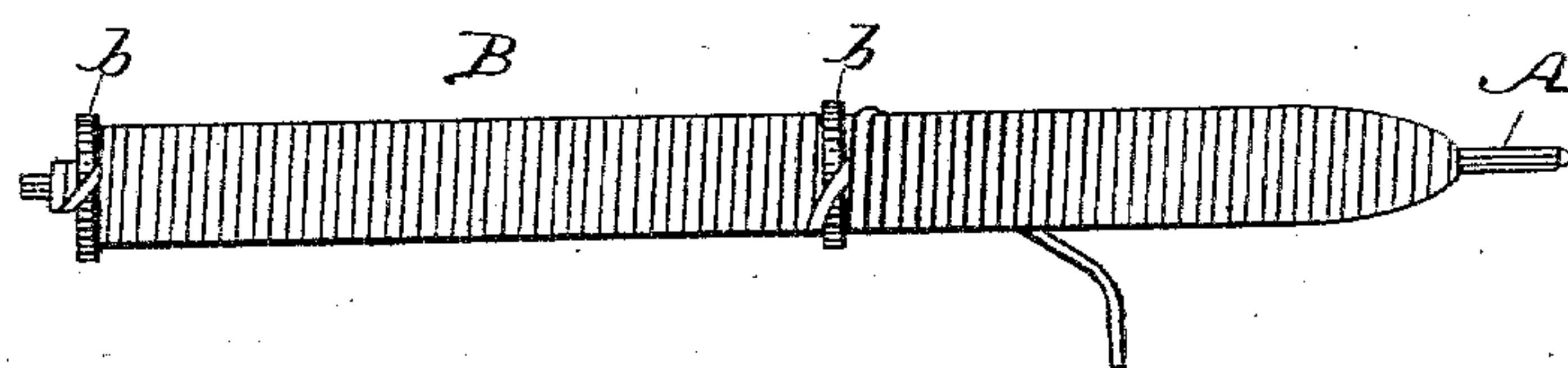
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



WITNESSES:

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# UNITED STATES PATENT OFFICE

BENJAMIN F. LANDIS, OF ST. JOSEPH, MISSOURI.

## BOBBIN.

SPECIFICATION forming part of Letters Patent No. 305,935, dated September 30, 1884.

Application filed April 21, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN F. LANDIS, a citizen of the United States, residing at St. Joseph, in the county of Buchanan and State of Missouri, have invented certain new and useful Improvements in Bobbins, of which the following is a description.

This invention relates to that class of bobbins which are used to carry thread in the shuttles of sewing-machines, &c., and its object is to so construct and wind a long bobbin with thread that it will give off the thread at a point near the center of the bobbin with less side draft on the thread than is usual to long bobbins. A bobbin of the class under consideration usually consists of a body having a flange or head at each end, and the thread is usually wound in even layers from end to end on the body of the bobbin. In using the thread off from such a bobbin in a shuttle, the thread, passing from a central hole in the side of the shuttle, will gradually traverse the whole length of the bobbin, thus drawing with a great deal of side strain.

To obviate this my invention consists in the construction and combination of parts forming a bobbin, and in the method of winding the same, hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 represents one form of my bobbin complete. Fig. 2 represents the same only partly filled with thread. Fig. 3 represents the same with the thread partly used off, and Fig. 4 is a transverse section of a modification of the same. Fig. 5 represents a modification.

A represents the spindle, which is necessarily a part of my bobbin. This spindle may be a mere stiff wire, which is the usual form that I expect to give it; or it may be hollow to fit onto another spindle. In the latter case a stiff paper quill or hollow spindle, *a*, will answer the purpose.

B and C represent two spools bored to turn freely and to slide freely endwise on the spindle A, or quill *a*, whichever it may be convenient to use. The spools have flanges *b*, as usual. The length of each spool is about

one-third the interior length of the chamber 50 in the shuttle.

In winding this bobbin, one of the spools—say B—is placed on a spindle near one end and wound full. Then the thread is wound quickly across the open space on the spindle 55 between the two spools onto the spools C, and that is filled. Then the space between the two spools is wound full, the thread is cut and fastened, and the bobbin is complete.

This bobbin, either having a wire or a quill 60 spindle, may be furnished by the thread-manufacturer and placed on the market the same as common spool-thread is now done.

In use, the bobbin is first placed in the shuttle and the thread drawn from the central 65 side hole thereof. Then the thread will first be unwound from the space between the spools, having to traverse only one-sixth the length of the spindle each side of the hole in the shuttle. Then spool C will be drawn 70 by the thread to slide along the spindle in front of the hole. Now, this spool, moving freely endwise on the spindle, will adjust itself to the strain of the thread until the thread draws almost directly to the hole all of the 75 time, and when this spool is emptied the thread will draw the spool B in front of the hole in the shuttle in a similar manner, crowding away the empty spool C.

As the combination of such a bobbin with 80 a shuttle is the subject of another application for a patent by myself, I do not here claim it. Such bobbins may be used in shuttles for weaving as well as for sewing. If it were an object, there might be more than two spools 85 on each spindle similarly wound.

That portion of the spindle on which the spools are placed may be made square, so that the spindle must revolve with the spools; but the spools must be fitted free enough to 90 slide endwise on the spindle, the spindle revolving on its own journals in the shuttle at the ends of the spools. On the same principle I may use a single spool at one end of the spindle and then wind the thread onto 95 the uncovered portion of the spindle at the other end, accomplishing the same purpose to some extent.

The bobbin herein described is the subject of another application, Serial No. 101,897, filed July 25, 1883, in combination with a shuttle for its use.

5 What I claim as my invention, and desire to secure by Letters Patent, is—

As an article of manufacture, a bobbin consisting of a spindle, a spool thereon, and a

continuous thread wound partly on the spool and partly on the spindle, substantially as is shown and described.

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Witnesses:

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